

=> d his

(FILE 'HOME' ENTERED AT 09:37:57 ON 16 OCT 2003)

FILE 'HCAPLUS' ENTERED AT 09:38:04 ON 16 OCT 2003

E DOMB/AU

L1 242 S E3-E12

L2 8 S L1 AND OLIGOAMIN?

SELECT RN L2 1-8

FILE 'REGISTRY' ENTERED AT 09:39:47 ON 16 OCT 2003

L3 78 S E25-102

FILE 'HCAPLUS' ENTERED AT 09:41:08 ON 16 OCT 2003

L4 7 S L2 AND L3

L5 8 S L2 OR L4

=> d ibib abs hitstr ind 1-8

L5 .ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2003:599036 HCAPLUS

DOCUMENT NUMBER: 139:208423

TITLE: Dextran-spermine conjugate: An efficient vector for gene delivery

AUTHOR(S): Azzam, T.; Eliyahu, H.; Makovitzki, A.; Domb, A. J.

CORPORATE SOURCE: Department of Medicinal Chemistry and Natural Products, School of Pharmacy, Faculty of Medicine, The Hebrew University of Jerusalem, Jerusalem, 91120, Israel

SOURCE: Macromolecular Symposia (2003), 195(2002 IUPAC World Polymer Congress), 247-261

CODEN: MSYMEC; ISSN: 1022-1360

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Cationic Polysaccharides based on oligoamine-dextran conjugates were synthesized and tested as vectors for gene transfection. Dextran with 40 kDa in av. mol. wt. was oxidized under mild conditions by potassium periodate to obtain the resp. polyaldehydes in relatively high yields (.apprx.90%). The oxidized dextran was reacted by reductive amination with various oligoamines of 2 to 4 amino groups to obtain the corresponding imine-conjugates. These water-sol. polymers were then reduced by excess of sodium borohydride to obtain the corresponding amine-conjugates in 30-40% overall yield. The electrostatic interactions of the representative polycations with plasmid DNA were evaluated as a function of charge ratio (+/-, polymer/DNA) and ionic strength of the medium applying the ethidium-bromide quenching assay. Although most synthetic polycations formed stable complexes with Plasmid DNAs, only the dextran-spermine conjugate of a defined amino content and mol. wt. was able to transfect cells with high efficiency.

IT 71-44-3D, Spermine, conjugates with oxidized dextran

124-20-9D, Spermidine, conjugates with oxidized dextran

4605-14-5D, N,N'-Bis-(3-aminopropyl)-1,3-propanediamine,

conjugates with oxidized dextran 9004-54-0D, Dextran, oxidized,

conjugates with oligoamines 30734-81-7D, conjugates

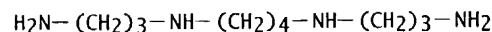
with oxidized dextran

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(dextran-spermine conjugate as vector for gene delivery)

RN 71-44-3 HCAPLUS

CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



=> d que 115

L5 17699 SEA FILE=REGISTRY ABB=ON PLU=ON (NC2 OR NC3 OR NC4 OR NC5 OR NC6 OR NC7)/ES AND NR=1 AND (N AND C AND H)/ELS AND 3/ELC.SUB

L6 11110 SEA FILE=REGISTRY ABB=ON PLU=ON L5 NOT ("PYRIDINYL" OR "PYRIDINE")

L7 9211 SEA FILE=REGISTRY ABB=ON PLU=ON L6 NOT "PYRROLE"

L9 7927 SEA FILE=REGISTRY ABB=ON PLU=ON L7 NOT 46.156.30/RID

L10 7502 SEA FILE=REGISTRY ABB=ON PLU=ON L9 NOT "PYRROL"

L11 31086 SEA FILE=HCAPLUS ABB=ON PLU=ON L10

L12 365 SEA FILE=HCAPLUS ABB=ON PLU=ON L11(L)(GRAFT? OR CONJUGAT?)

L13 506 SEA FILE=HCAPLUS ABB=ON PLU=ON L11(L)(POLYSAC? OR DEXTRAN OR ARABINOAL? OR PULLULAN OR CELLULOS? OR CELLOBI? OR CHITOSAN OR INULIN OR ALGIN? OR HYALURON?)

L14 22 SEA FILE=HCAPLUS ABB=ON PLU=ON L12 AND L13

L15 17 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND PY<2002

=> d que 175

L35 82809 SEA FILE=REGISTRY ABB=ON PLU=ON (((N AND H AND C)/ELS AND 3/ELC.SUB) OR ((N AND C AND H AND O)/ELS AND 4/ELC.SUB AND O=1)) NOT RSD/FA

L45 STR

N 1 N 2 Ak 4

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS LIN SAT AT 4

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L48 52401 SEA FILE=REGISTRY ABB=ON PLU=ON L35 NOT (PMS/CI OR ("NITRILE" OR "CYANO"))

L50 21608 SEA FILE=REGISTRY SUB=L48 SSS FUL L45

L53 3041 SEA FILE=REGISTRY ABB=ON PLU=ON N=2 AND "DIAMINE" AND (H AND N AND C)/ELS AND 3/ELC.SUB NOT (RSD/FA OR PMS/CI)

L55 199867 SEA FILE=HCAPLUS ABB=ON PLU=ON L50

L56 56697 SEA FILE=HCAPLUS ABB=ON PLU=ON L53

L57 200897 SEA FILE=HCAPLUS ABB=ON PLU=ON (L55 OR L56)

L63 459177 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYSACCHARIDES+PFT,NT/CT

L65 363 SEA FILE=HCAPLUS ABB=ON PLU=ON L63(L)(POLYAMIN? OR OLIGOAMIN?)

L66 9729 SEA FILE=HCAPLUS ABB=ON PLU=ON L63(L)(CONJUGAT? OR LINK? OR GRAFT? OR CONDENS?)

L68 10064 SEA FILE=HCAPLUS ABB=ON PLU=ON (L65 OR L66)

L69 497 SEA FILE=HCAPLUS ABB=ON PLU=ON L68 AND L57

L74 971 SEA FILE=HCAPLUS ABB=ON PLU=ON (HYDROPHOB? OR AMPHIPLIL?)/OBI (L)(CONJUGAT? OR LINK? OR GRAFT? OR CONDENS?)

L75 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L74 AND L69

=> d que 178

L35 82809 SEA FILE=REGISTRY ABB=ON PLU=ON (((N AND H AND C)/ELS AND 3/ELC.SUB) OR ((N AND C AND H AND O)/ELS AND 4/ELC.SUB AND O=1)) NOT RSD/FA

L45 STR

N 1 N 2 Ak 4

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS LIN SAT AT 4

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L48 52401 SEA FILE=REGISTRY ABB=ON PLU=ON L35 NOT (PMS/CI OR ("NITRILE"
OR "CYANO"))
L50 21608 SEA FILE=REGISTRY SUB=L48 SSS FUL L45
L53 3041 SEA FILE=REGISTRY ABB=ON PLU=ON N=2 AND "DIAMINE" AND (H
AND N AND C)/ELS AND 3/ELC.SUB NOT (RSD/FA OR PMS/CI)
L55 199867 SEA FILE=HCAPLUS ABB=ON PLU=ON L50
L56 56697 SEA FILE=HCAPLUS ABB=ON PLU=ON L53
L57 200897 SEA FILE=HCAPLUS ABB=ON PLU=ON (L55 OR L56)
L63 459177 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYSACCHARIDES+PFT,NT/CT
L65 363 SEA FILE=HCAPLUS ABB=ON PLU=ON L63(L)(POLYAMIN? OR OLIGOAMIN?
)
L66 9729 SEA FILE=HCAPLUS ABB=ON PLU=ON L63(L)(CONJUGAT? OR LINK? OR
GRAFT? OR CONDENS?)
L68 10064 SEA FILE=HCAPLUS ABB=ON PLU=ON (L65 OR L66)
L69 497 SEA FILE=HCAPLUS ABB=ON PLU=ON L68 AND L57
L72 11384 SEA FILE=HCAPLUS ABB=ON PLU=ON (FATTY OR GLYCOL OR PPHOSPHOLI
PID OR ?CHOLEST? OR OLEIC OR LIPID)/OBI(L)(CONJ? OR GRAFT? OR
COVALENT? OR LINK? OR LINK?)
L73 41 SEA FILE=HCAPLUS ABB=ON PLU=ON L69 AND L72
L77 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L73 AND (POLYAMIN? OR
OLIGOAMIN? OR DIAMIN?)
L78 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L77 NOT (VANCOMYCIN OR
LATERAL OR TRIHALOPYRIDINE)/TI

=> d que 189

L35 82809 SEA FILE=REGISTRY ABB=ON PLU=ON (((N AND H AND C)/ELS AND
3/ELC.SUB) OR ((N AND C AND H AND O)/ELS AND 4/ELC.SUB AND
O=1)) NOT RSD/FA
L45 STR
N1 N2 Ak 4

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
GGCAT IS LIN SAT AT 4
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L48 52401 SEA FILE=REGISTRY ABB=ON PLU=ON L35 NOT (PMS/CI OR ("NITRILE"
OR "CYANO"))
L50 21608 SEA FILE=REGISTRY SUB=L48 SSS FUL L45
L53 3041 SEA FILE=REGISTRY ABB=ON PLU=ON N=2 AND "DIAMINE" AND (H
AND N AND C)/ELS AND 3/ELC.SUB NOT (RSD/FA OR PMS/CI)
L55 199867 SEA FILE=HCAPLUS ABB=ON PLU=ON L50
L56 56697 SEA FILE=HCAPLUS ABB=ON PLU=ON L53
L57 200897 SEA FILE=HCAPLUS ABB=ON PLU=ON (L55 OR L56)
L63 459177 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYSACCHARIDES+PFT,NT/CT
L65 363 SEA FILE=HCAPLUS ABB=ON PLU=ON L63(L)(POLYAMIN? OR OLIGOAMIN?
)
L66 9729 SEA FILE=HCAPLUS ABB=ON PLU=ON L63(L)(CONJUGAT? OR LINK? OR
GRAFT? OR CONDENS?)
L68 10064 SEA FILE=HCAPLUS ABB=ON PLU=ON (L65 OR L66)
L69 497 SEA FILE=HCAPLUS ABB=ON PLU=ON L68 AND L57
L72 11384 SEA FILE=HCAPLUS ABB=ON PLU=ON (FATTY OR GLYCOL OR PPHOSPHOLI
PID OR ?CHOLEST? OR OLEIC OR LIPID)/OBI(L)(CONJ? OR GRAFT? OR
COVALENT? OR LINK? OR LINK?)

10/031,728

L73 41 SEA FILE=HCAPLUS ABB=ON PLU=ON L69 AND L72
L86 31 SEA FILE=HCAPLUS ABB=ON PLU=ON L73 AND PY<2002
L89 28 SEA FILE=HCAPLUS ABB=ON PLU=ON L86 NOT (POLYACROLEIN OR
ACRYLATE OR ABSORBENT OR SENSOR)/TI

=> d que 194

L35 82809 SEA FILE=REGISTRY ABB=ON PLU=ON (((N AND H AND C)/ELS AND
3/ELC.SUB) OR ((N AND C AND H AND O)/ELS AND 4/ELC.SUB AND
O=1)) NOT RSD/FA
L45 STR
N 1 N 2 Ak 4

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
GGCAT IS LIN SAT AT 4
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L48 52401 SEA FILE=REGISTRY ABB=ON PLU=ON L35 NOT (PMS/CI OR ("NITRILE"
OR "CYANO"))
L50 21608 SEA FILE=REGISTRY SUB=L48 SSS FUL L45
L53 3041 SEA FILE=REGISTRY ABB=ON PLU=ON N=2 AND "DIAMINE" AND (H
AND N AND C)/ELS AND 3/ELC.SUB NOT (RSD/FA OR PMS/CI)
L55 199867 SEA FILE=HCAPLUS ABB=ON PLU=ON L50
L56 56697 SEA FILE=HCAPLUS ABB=ON PLU=ON L53
L57 200897 SEA FILE=HCAPLUS ABB=ON PLU=ON (L55 OR L56)
L63 459177 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYSACCHARIDES+PFT,NT/CT
L65 363 SEA FILE=HCAPLUS ABB=ON PLU=ON L63(L)(POLYAMIN? OR OLIGOAMIN?
)
L66 9729 SEA FILE=HCAPLUS ABB=ON PLU=ON L63(L)(CONJUGAT? OR LINK? OR
GRAFT? OR CONDENS?)
L68 10064 SEA FILE=HCAPLUS ABB=ON PLU=ON (L65 OR L66)
L69 497 SEA FILE=HCAPLUS ABB=ON PLU=ON L68 AND L57
L90 497 SEA FILE=HCAPLUS ABB=ON PLU=ON L69 AND L57
L91 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L90 AND PRINTING/OBI
L92 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L91 AND WATERFAST/TI
L93 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L90 AND INK
L94 4 SEA FILE=HCAPLUS ABB=ON PLU=ON (L92 OR L93)

=> s 115 or 175 or 178 or 189 or 194

L95 57 L15 OR L75 OR L78 OR L89 OR L94

=> s 195 and py<2002

21538960 PY<2002
L96 53 L95 AND PY<2002

=> d ibib abs hitstr 1-53

L96 ANSWER 1 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:350566 HCAPLUS

DOCUMENT NUMBER: 138:112169

TITLE: Highly active polysaccharide based polycations for DNA
cell transfection

AUTHOR(S): Azzam, T.; Makovitzki, A.; Eliyahu, H.; Raskin, A.;
Linial, M.; Bernholz, Y.; Domb, A. J.

CORPORATE SOURCE: Department of Medicinal Chemistry and Natural
Products, The Hebrew University, Jerusalem, 91120,
Israel

SOURCE: Proceedings - 28th International Symposium on
Controlled Release of Bioactive Materials and 4th

=> d que 198

L35 82809 SEA FILE=REGISTRY ABB=ON PLU=ON ((N AND H AND C)/ELS AND
3/ELC.SUB) OR ((N AND C AND H AND O)/ELS AND 4/ELC.SUB AND
O=1)) NOT RSD/FA

L45 STR

N 1 N 2 Ak 4

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS LIN SAT AT 4

DEFAULT ELEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L48 52401 SEA FILE=REGISTRY ABB=ON PLU=ON L35 NOT (PMS/CI OR ("NITRILE"
OR "CYANO"))

L50 21608 SEA FILE=REGISTRY SUB=L48 SSS FUL L45

L53 3041 SEA FILE=REGISTRY ABB=ON PLU=ON N=2 AND "DIAMINE" AND (H
AND N AND C)/ELS AND 3/ELC.SUB NOT (RSD/FA OR PMS/CI)

L55 199867 SEA FILE=HCAPLUS ABB=ON PLU=ON L50

L56 56697 SEA FILE=HCAPLUS ABB=ON PLU=ON L53

L57 200897 SEA FILE=HCAPLUS ABB=ON PLU=ON (L55 OR L56)

L63 459177 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYSACCHARIDES+PFT,NT/CT

L65 363 SEA FILE=HCAPLUS ABB=ON PLU=ON L63(L)(POLYAMIN? OR OLIGOAMIN?
)

L66 9729 SEA FILE=HCAPLUS ABB=ON PLU=ON L63(L)(CONJUGAT? OR LINK? OR
GRAFT? OR CONDENS?)

L68 10064 SEA FILE=HCAPLUS ABB=ON PLU=ON (L65 OR L66)

L69 497 SEA FILE=HCAPLUS ABB=ON PLU=ON L68 AND L57

L97 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L69(L)(CONJUGAT? OR LINK? OR
GRAFT? OR CONDENS?)(L)STEROID?

L98 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L97 AND PY<2002

=> d ibib abs hitstr 1-7 198

L98 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:688120 HCAPLUS

DOCUMENT NUMBER: 133:271616

TITLE: Hemoglobin-antioxidant conjugates

INVENTOR(S): Adamson, James Gordon; McIntosh, Greg Angus

PATENT ASSIGNEE(S): Hemosol Inc., Can.

SOURCE: PCT Int. Appl., 49 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000056367	A1	20000928	WO 2000-CA299	20000320 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
NZ 513933	A	20010928	NZ 2000-513933	20000320 <--
EP 1163010	A1	20011219	EP 2000-910473	20000320 <--